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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,482	07/27/2006	Marcos C. Tzannes	5550-52-PUS	1762
62574	7590	02/09/2011	EXAMINER	
Jason H. Vick Sheridan Ross, PC Suite # 1200 1560 Broadway Denver, CO 80202			CORRIELUS, JEAN B	
			ART UNIT	PAPER NUMBER
			2611	
			NOTIFICATION DATE	DELIVERY MODE
			02/09/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jvick@sheridanross.com

Office Action Summary	Application No.	Applicant(s)	
	10/597,482	TZANNES, MARCOS C.	
	Examiner	Art Unit	
	Jean B. Corrielus	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 88-121 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 88-121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/28/10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 88-121 are objected to because of the following informalities:

As per claim 88, "correctable" is not a positive recitation. The claim must be amended to replace the same by an improved and/or equivalent language.

As per claim 91, "because" is not a positive limitation. The limitation following "because" will not be given any patentable weight.

As per claims 96, 104, 105, 113, 121, see claim 88.

As per claims 103, 108, 120, see claim 91. Any claim whose base claim is objected is likewise objected. Appropriate correction is required.

Specification

2. The disclosure is objected to because of the following informalities: paragraph 0047, line 2, shouldn't "operating" be deleted?

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 88-89, 91-94, 96-97, 99-106, 108-114, and 116-121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi US Patent No. 7,428,669 in view of Hariton et al US Patent No. 4,845,466.

As per claim 88, Cioffi teaches a method and apparatus comprising collecting a value “receiving information”, at the management interface note steps 405-420 of fig. 4 and col. 9, lines 39-42; and updating, based on the received information, a first INP value to a second, different, INP value, the first INP value specifying a first number of corrupted DMT symbols that can be corrected and the second INP value specifying a second number of corrupted DMT symbols that can be corrected. (note 450-460 (fig. 4) and col. 4, lines 43-47, the INP is changed from one value to another value. In addition, note that is an inherent nature of INP to specify number of corrupted symbols to be corrected as defined by standards). As shown in fig. 4, Cioffi teaches that the updating occurs during data transmission (Showtime) as evidence by box 405 of fig. 4 without reinitializing the transceiver. However Cioffi fails to teach that the information or value indicates a repetition period of impulse noise indicating how often impulse noise events occur on a channel. Hariton et al teaches providing information indicating the frequency of occurrence of impulse noise on a channel and uses such information to avoid or compensate for impulse noise, note abstract last 7 lines, col. 1, lines 56-61, col. 2, lines 50-52, col. 3, lines 46-49, col. 4, lines 10-15, lines 33-37. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Cioffi as it would have ensure that proper compensation is provided to remove the impulse noise affecting the quality of the received signal.

As per claim 89, Cioffi does not teach that the impulse noises are produced from AC power lines. However, as noted by Hariton et al AC lines are known as a source of impulse noise. One skill in the art would have been motivated to provide compensation

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for such type of noise, i.e. the type generated by AC power lines and the motivation would have been the same as provided above.

As per claim 91, Cioffi teaches that the INP is greater see, entire document and specifically col. 8, lines 1-2. (Note that the limitation following because is not a positive limitation and therefore has not been provided any patentable weight).

As per claim 92 Cioffi teaches that the provider updates the first INP see col. 1, line 37.

As per claim 93 the INP is updated automatically notes col. 11, lines 1-4.

As per claim 94, the message is used to communicate the second INP value note col. 11, lines 1-5.

As per claim 96, see claim 88. In addition, Cioffi teaches that the INP value is updated (note col. 11, line 1). Note that in order for the INP value to be updated an initial value has to be first selected.

As per claim 97, see claim 89.

As per claim 99, Cioffi generated value as measured in step 410 would inherently include an impact of impulse noise because the impulse noise would affect signal quality.

As per claim 100, see claim 92.

As per claim 101, see claim 93.

As per claim 102, see claim 94.

As per claim 103, see claim 95. (Note that the limitation following because is not a positive limitation and therefore has not been provided any patentable weight).

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As per claim 104 see claim 88. Cioffi teaches the CCR is adjusted (increase or decrease) by changing the INP value note col. 4, lines 43-46. one skill in the art would have understood that in order to increase or decrease the CCR the INP value has to be increase or decrease as well. Hence, decreasing the INP value is inherently taught by Cioffi.

As per claim 105, see claim 88.

As per claim 106, see claim 89.

As per claim 108, see claim 91.

As per claim 109, see claim 92.

As per claim 110, see claim 93.

As per claim 111, see claim 94.

as per claim 112 see claim 95.

as per claim 113, see claim 96.

As per claim 114, see claim 97.

As per claim 116, see claim 99.

As per claim 117, see claim 100.

As per claim 118, see claim 101.

As per claim 119, see claim 102.

As per claim 120, see claim 103.

As per claim 121, see claim 104.

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5. Claims 90, 95, 98, 107, and 115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi US Patent No. 7,428,669 in view of Hariton US patent No. 4,845,466 further in view of Azenkot et al US Patent No. 7,050,419.

As per claim 90, as applied to claim 88 above, Cioffi and Hariton teach every feature of the claimed invention but do not explicitly teach the limitation of providing the length of the impulse noise. Azenkot teaches the length of impulse noise and uses such information to compensate for impulse noise note col. 21, lines 4-10. It would have been obvious to one skill in the art to incorporate such a teaching in Cioffi and Hariton et al so as to fully compensate for the entire impulse noise present in the line.

As per claim 95, it would have been obvious to one skilled in the art to set the length of the impulse noise in such a way as to exceed a correction capability of the first INP value so that appropriate measure can be taken to change the INP value to compensate for entire impulse span.

As per claim 98, see claim 90.

As per claim 107, see claim 90.

As per claim 115, see claim 98.

Response to Arguments

6. Applicant's arguments filed 12/17/10 have been fully considered but they are not persuasive. It is alleged that "correctable" and "because", as recited in the claims are positive limitation. Examiner disagrees. The limitation "correctable" does not convey that the number of corrected symbols **is actually presently corrected**. Therefore, such limitation is not a positive limitation. The limitation "because" recited in the claim is not a

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properly recited limitation. With respect to applicant's argument regarding the art rejection, as noted in the above rejection, Hariton teaches, in the abstract last 7 lines, col. 1, lines 56-61, col. 2, lines 50-52, col. 3, lines 46-49, col. 4, lines 10-15, lines 33-37 and specifically at col. 2 lines 40-42, the determination of the "periodicity of noise repetition" (repetition period of the impulse noise) and uses such information, indicating how often impulse noise events occurs in a channel, to compensate for such noise event. In that regard, the examiner notes that applicant's claimed invention likewise takes advantage of the periodicity of noise event (repetition period of impulse noise) to compensate for such anomalies in the channel. Hence, given the disclosure of Hariton, one skill in the art would have been motivated to modify Cioffi using the periodicity of the noise event (repetition period) for the reason stated in the above rejection.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Monday-Thursday from 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jean B Corrielus/
Primary Examiner, Art Unit 2611